Math 0350 Practice Test **Unit One**
Chapters 4 and 8 **Martin-Gay 4th edition**

1. Solve by graphing: $\begin{cases} y = 2x - 1 \\ y = -3x + 4 \end{cases}$

2. Solve by substitution: $\begin{cases} 2x + y = 4 \\ 3x - 2y = 6 \end{cases}$

3. Solve by addition: $\begin{cases} 4x - 5y = -7 \\ 6x + 3y = 21 \end{cases}$

4. Solve using any method: $\begin{cases} x - 3y = 6 \\ 2x - 6y = 12 \end{cases}$

5. Solve using any method: $\begin{cases} y = 5x - 1 \\ 5x - y = 3 \end{cases}$

6. Tickets for a show cost $2.00 for adults and $1.50 for children. How many adult and how many children's tickets were sold if a total of 127 tickets were sold for $214?

7. Recall that two angles are complementary if their sum is 90°. Find the measures of two complementary angles if one is 36 degrees less than the other.

8. Using function notation, write the equation of a line containing the point $(-1, 2)$ with slope of 3.

9. Using function notation, write the equation of a line containing the points $(4, -1)$ and $(-2, 5)$.

10. Using function notation, write the equation of a line containing the points $(1, -1)$ and perpendicular to $6y + 2x = 2$.

11. Using function notation, write the equation of a line containing the points $(-2, 4)$ and parallel to $4y - 2x = 9$.

12. Write the equation of the horizontal line containing the point $(5, 3)$. Use function notation.

13. If y varies directly as x, find the constant of variation and the direct variation equation for this situation: $y = 4$ when $x = 12$.

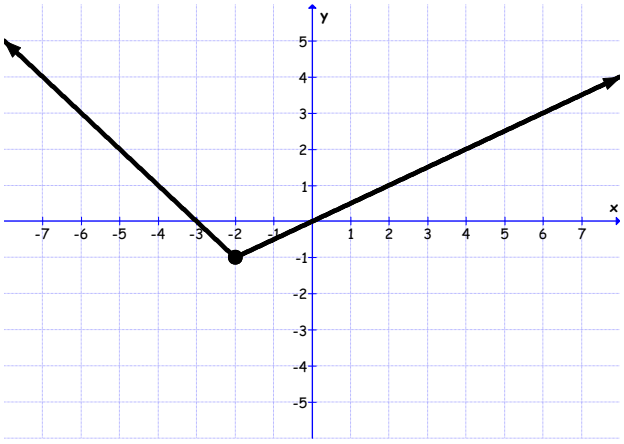
14. If y varies inversely as x, find the constant of variation and the direct variation equation for this situation: $y = 3$ when $x = 5$.

15. Graph the function $g(x)=(x+1)^2$. Label 3 exact points. List the domain and range.

16. Graph the function $f(x)=\sqrt{x-2}+1$. Label 3 exact points. List the domain and range.

17. Graph the function $f(x)=|x|-3$. Label 3 exact points. List the domain and range.

Use the graph of f (x) below to answer 18-21.



18. $f(2)=?$

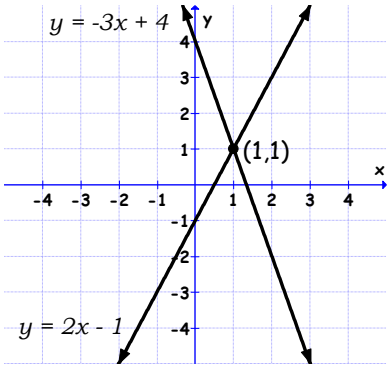
19. Find all values of x for which $f(x)=2$

20. The domain of $f(x)$ is?

21. The range of $f(x)$ is?

Solutions – Practice Exam One

1.



2. $(2,0)$

3. $(2,3)$

4. Infinitely many solutions. Any point on $x-3y=6$

5. No solution. The lines are parallel.

6. 47 adult tickets, 80 children's tickets.

7. 27° and 63°

8. $f(x)=3x+5$

9. $f(x)=-x+3$

10. $f(x)=3x-4$

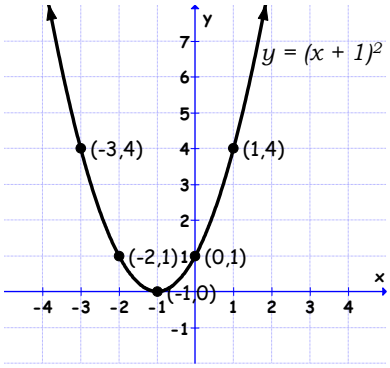
11. $f(x)=\frac{1}{2}x+5$

12. $f(x)=3$

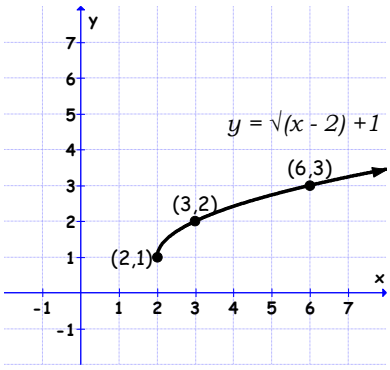
13. $k=\frac{1}{3}$; $y=\frac{1}{3}x$

14. $k=15$; $y=\frac{15}{x}$

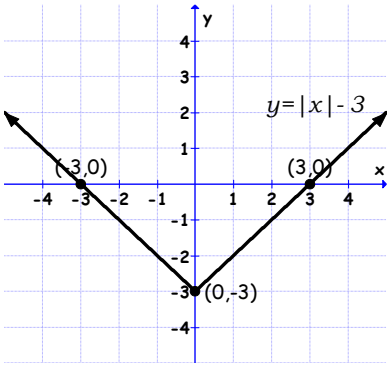
15. Domain: $(-\infty,\infty)$ Range: $[0,\infty)$



16. Domain: $[2,\infty)$ Range: $[1,\infty)$



17. Domain: $(-\infty,\infty)$ Range: $[-3,\infty)$



18. $f(2)=1$

19. $f(-5)=2$; $f(4)=2$. The required x values are -5 and 4

20. Domain: $(-\infty,\infty)$

21. Range: $[-1,\infty)$